

FIG. 2 Step 1 Compare & Select Feedstocks Step 2 Develop GC/MS Assay for Individual Higher Diamondoids Step 3 Distill Feedstock to Concentrate Higher Diamondoids in Atmospheric Residuum Step 4 (Optional) Fractionate Higher Diamondoids by High-Temperature Vacuum Distillation Step 5 (Optional) Fractions to Remove Nondiamondoids Thereby Concentrating Higher Diamondoids Step 7' Step 7 Step 6 (Optional) Isolate Higher Diamondoid by Isolate Higher Diamondoid by Remove Aromatic and Polar Preparative Gas Multi-Column HPLC Compounds by Low-Pressure Chromatography Liquid Chromatography Step 8 (Optional) Further Purify HPLC Fractions Using Preparative Gas Chromatography and vice versa

APPLICATION FILING DATE: FILED HEREWITH

INVENTORS: SHENGGAO LIU, ET AL. APPLICATION SERIAL NO: UNASSIGNED ATTORNEY DOCKET NO: 005950-833

TITLE: HETEROATOM-CONTAINING DIAMONDOID TRANSISTORS

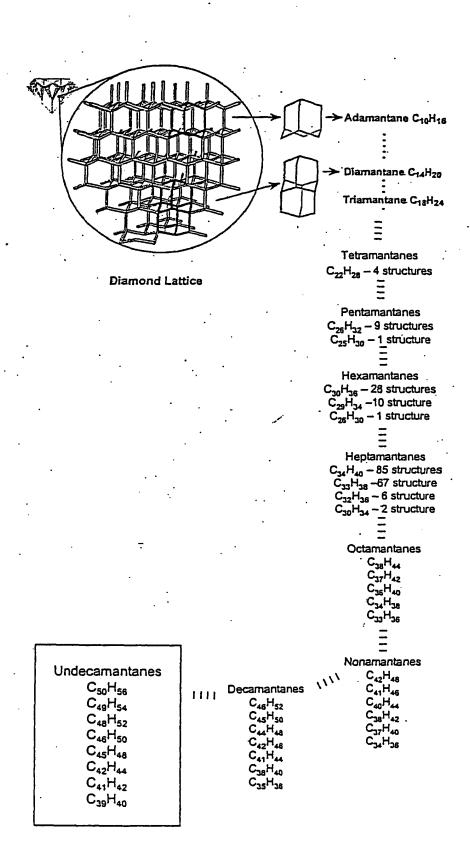
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FIG. 3

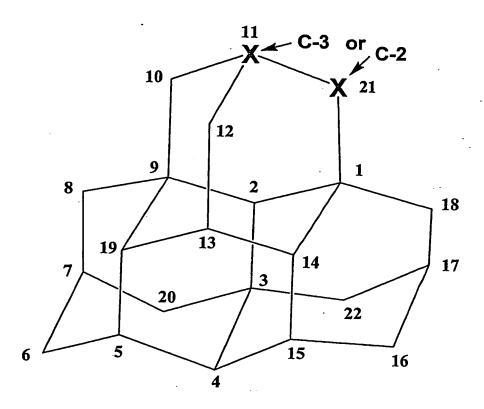


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FIG. 4A

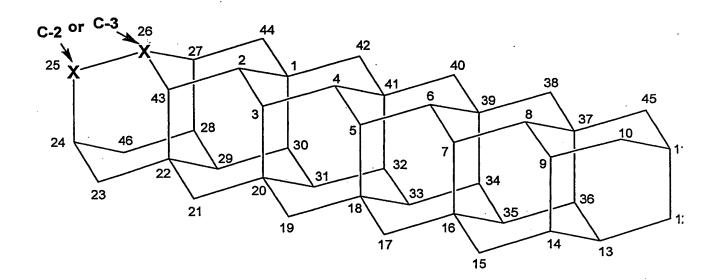


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FIG. 4B

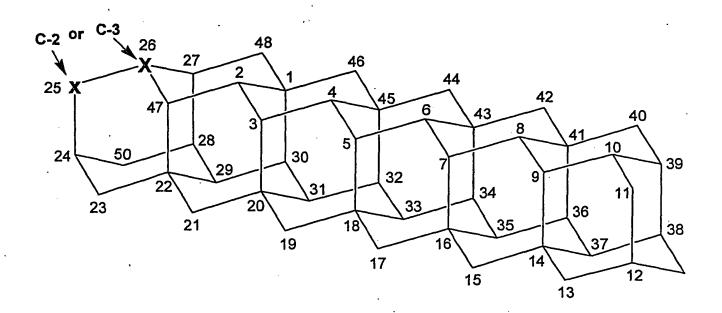


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FIG. 4C

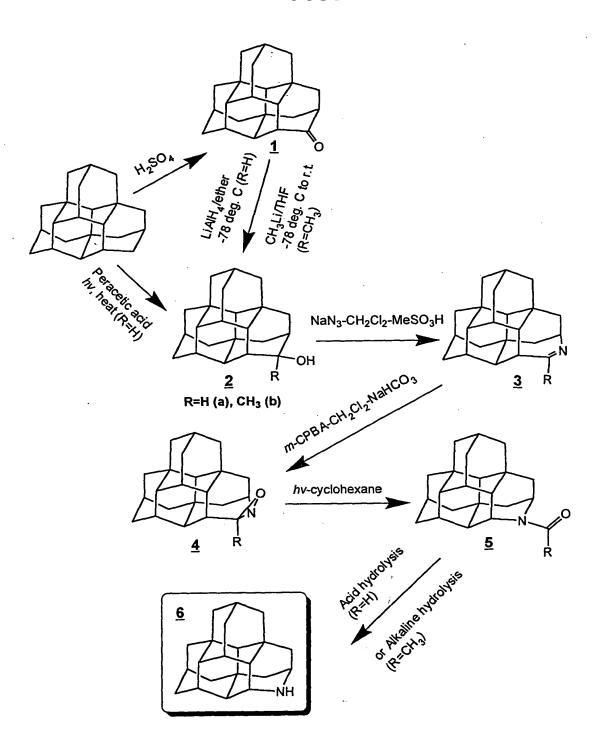


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FIG. 5A

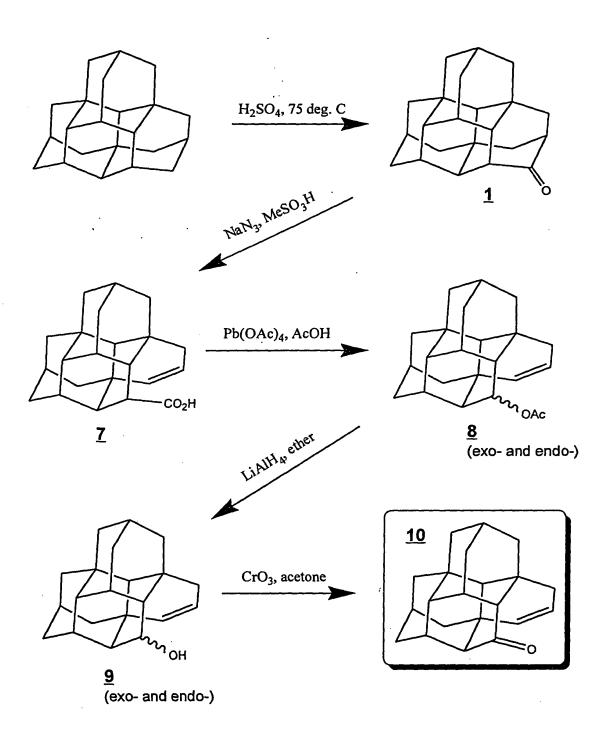


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FIG. 5B

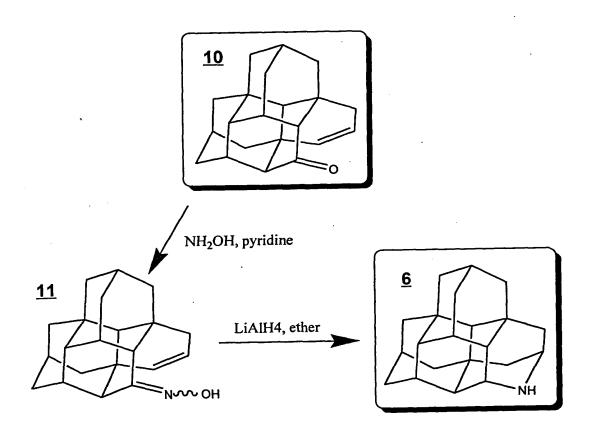


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FIG. 5B (Cont.)



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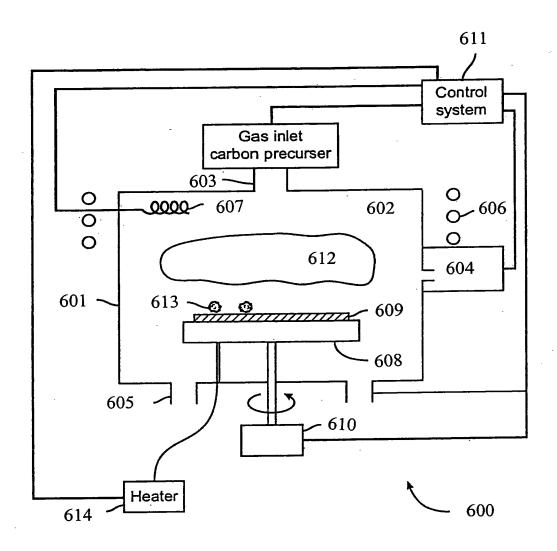
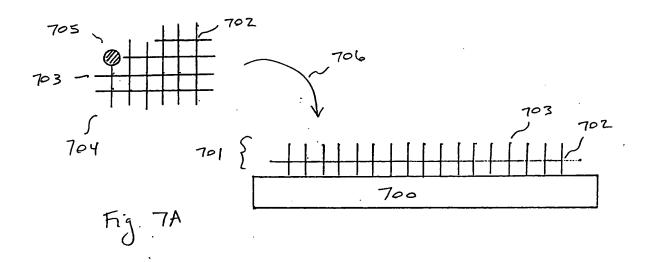


FIG. 6

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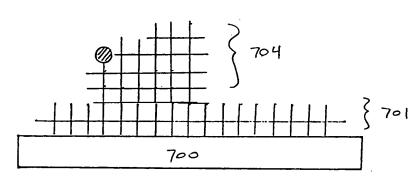
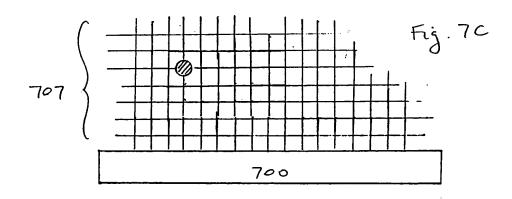


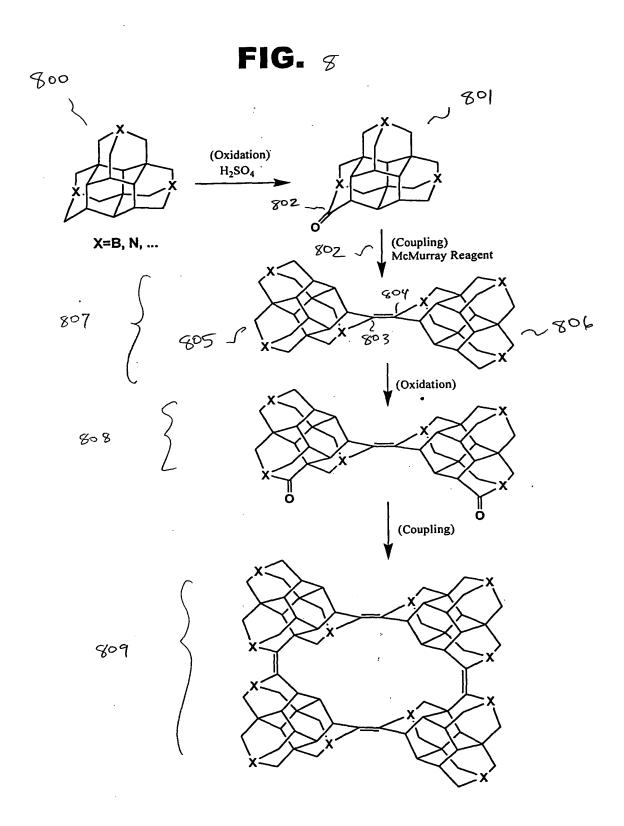
Fig. 713



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POLYACETYLENE

FIG. 9 A

POLYPYRROLE

FIG. 9 C

POLYTHIOPHENE

FIG. 9 E

POLY-3 METHYL THIOPHENE

FIG.

$$+$$
 S

POLYISOTHIANAPHENE

FIG. 91



POLYPARAPHEMYLENE

FIG. 9 B

$$+$$
 $\left\langle \right\rangle$ s + n

POLYPARAPHEMYLENE SULPHIDE

FIG. 9 D

POLYPARAPHEMYLENE VINYLENE

FIG.

POLYCARBAZOLE

FIG. 9H

POLY(1,6-HEPTADIYNE)

FIG. 9 J

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POLY-3 ALKYLTHIOPHENE

FIG. 9 K

FIG. 9 L.

POLYQUINOLINE

POLY-3 ALKYLSULFONATE

FIG. 9 M

POLYANILINE

FIG. 9 N

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N 1000 1002 1001 1003 1005 1006 ~ 1008 1007

Fig. 10

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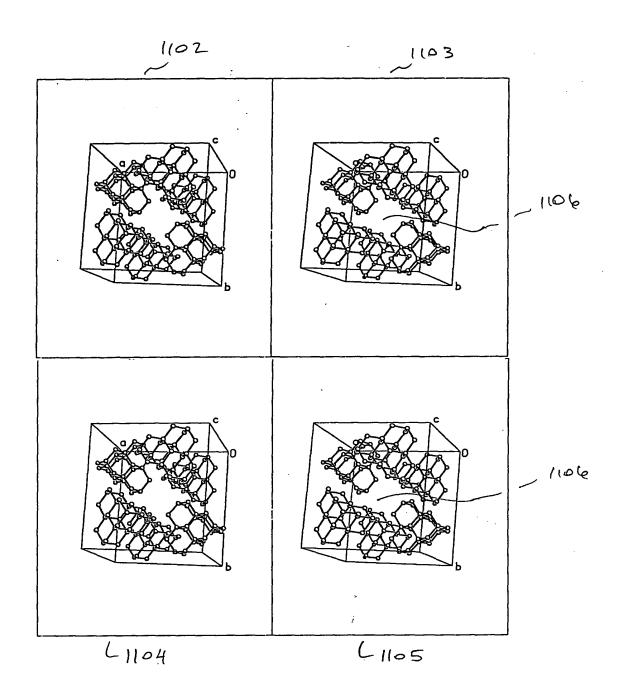


Fig. 11

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FIG. 12

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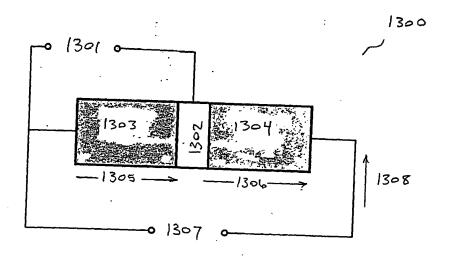


Fig. 13A

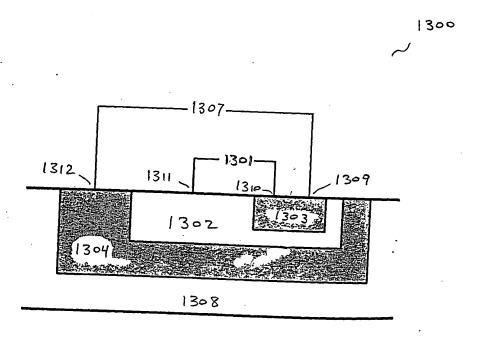


Fig. 13B

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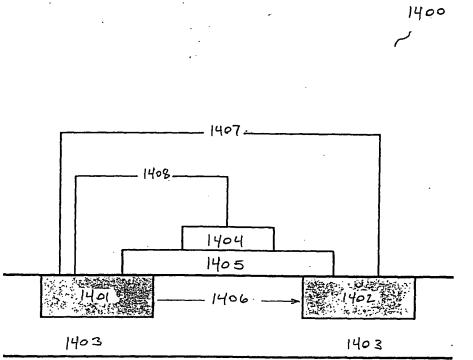


Fig. 14